AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT

1. CONTRACT ID CODE	Page	of	Pages
	1		29

2. AMENDMENT/~~MODIFICATION~~ NO.	3. EFFECTIVE DATE	4. REQUISITION/PURCHASE REQ. NO.	5. PROJECT NO. (If applicable)
002	August 27, 1998		

6. ISSUED BY	CODE	LC-3114	7. ADMINISTERED BY *(If other than Item 6)*	CODE
Bureau of Reclamation **Lower Colorado Region** **P.O. Box 61470** **Boulder City NV 89006-1470**	**http://www.lc.usbr.gov/~g3100/**			

8. NAME AND ADDRESS OF CONTRACTOR *(No., street, county, State, and ZIP code)*	(✓)	9A. AMENDMENT OF SOLICITATION NO.
	✓	**98-SI-30-12400**
		9B. DATED (SEE ITEM 11)
		August 18, 1998
		10A. MODIFICATION OF CONTRACT/ORDER NO.
		10B. DATED (SEE ITEM 13)
CODE / FACILITY CODE		

11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS

[**X**] The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers [ ] is extended, [**X**] is not extended.

Offerors must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods: (a) By completing Items 8 and 15, and returning 1 copy of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

12. ACCOUNTING AND APPROPRIATION DATA (if required)

13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS, IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.

(✓)	A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT/ORDER NO. IN ITEM 10A.
	B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b).
	C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:
	D. OTHER (Specify type of modification and authority)

E. **IMPORTANT**: Contractor [ ] is not [ ] is required to sign and return _____ copies to the issuing office.

14. DESCRIPTION OF AMENDMENT/~~MODIFICATION~~ (Organized by UCF section headings, including solicitation/contract subject matter where feasible)

Project Title: Pre-Engineered Carpentry/Sandblast Shop, Boulder Canyon Project, Hoover Dam, Arizona - Nevada

Purpose of Amendment: The purpose of this amendment is to (1) make revisions and/or corrections to the Specifications; (2) provide to-scale versions of 6 drawings; (3) add one drawing and delete another; and (4) incorporate an updated DOL Wage Rate Determination.

Receipt of Bids: The date and time for receipt of bids remains September 17, 1998 at 2 p.m., local time. The place for receipt of bids remains the Bureau of Reclamation, Lower Colorado Regional Office, Annex Building, Room AA-123, Nevada Hwy and Park Street, Boulder City, Nevada.

Acknowledgment: See block 11 above regarding how to acknowledge this amendment. The acknowledgment must be received at the place designated for receipt of offers (see block 8 of the "Solicitation, Offer, and Award," Standard Form 1442).

Bid Modification: See block 11 above if you have submitted your bid and now desire to modify it or withdraw it.

(Continued on following pages)

Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.

15A. NAME AND TITLE OF SIGNER (Type or print)		16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print)	
15B. CONTRACTOR/OFFEROR _____ (Signature of person authorized to sign)	15C. DATE SIGNED	16B. UNITED STATES OF AMERICA BY_____ (Signature of Contracting Officer)	16C. DATE SIGNED

Description of Changes:

1. Revisions and/or corrections are made to the specifications on the pages listed below.

Filing Instructions:

Remove Pages	Insert Pages
ToC pages i thru iv	ToC, pages i thru iv
1-23	1-23 and 1-24
3-5 and 3-6	3-5 and 3-6
4-5 and 4-6	4-5 and 4-6
5-19 and 5-20	5-19 and 5-20
5-25 thru 5-27	5-25 thru 5-27
9-3	9-3

2. An updated U.S. Department of Labor (DOL) Wage Rate Determination has been issued and the revised pages are incorporated.

Instructions: In Attachment No. 2, U.S. Department of Labor Wage Rate Determination(s), remove the following pages from Building, General Decision Number NV980009, dated 08/14/1998, and replace with the attached revised pages of Building, General Decision Number NV980009, dated 08/21/1998:

Remove Pages	Insert Pages
1 and 2	1 and 2
11 and 12	11 and 12

3. Drawings Nos. 2 through 7 are hereby replaced in order to provided drawings that are to scale. Drawing No. 16 (40-D-5370) is hereby deleted. Drawing No. 24 (45-300-201) is hereby incorporated.

Instructions: In Attachment No. 5, Drawings, remove Drawings Nos. 2 through 7 and replace with the attached drawings. Remove Drawing No. 16 and add Drawing No. 24.

SPECIFICATIONS

TABLE OF CONTENTS

(3) Asphalt cement.--Asphalt cement, grade AR-8000 for the surface course, conforming to the requirements of subsection 703.03.02 of the Nevada standard specifications shall be used in the mix unless otherwise approved by the Contracting Officer.

(4) Emulsified asphalt.--Emulsified asphalt, grade SS-1, conforming to the requirements of subsection 703.03.04 of the Nevada standard specifications shall be used where a tack coat is required to be applied.

(5) Liquid asphalt.--Liquid asphalt, grade MC-250, conforming to the requirements of subsection 703.03.03 of the Nevada standard specifications shall be used where a prime coat is required to be applied.

d. Construction.--Quality control shall be the responsibility of the Contractor. The construction requirements for plant operation, mixing, placing, finishing, compacting, and smoothing, including longitudinal joint construction and surface tolerances, for placement of the bituminous surface course shall be as specified in the applicable construction paragraphs of sections 303, 401, and 402 of the Nevada standard specifications.

Surfaces required to be given a tack coat shall be thoroughly cleaned prior to application of tack coat material. The emulsified asphalt tack coat shall be applied at a rate of approximately 0.08 gallon of diluted material per square yard and at a temperature between 75 and 130 'F. The emulsion shall be properly diluted with water and applied as specified in section 405 of the Nevada standard specifications.

The liquid asphalt prime coat shall be applied to the full width of the area of aggregate base course to be surfaced at a rate of approximately 0.25 gallon per square yard and at a temperature between 165 and 220 ^{o}F. The prime coat shall be allowed to dry prior to placing bituminous surfacing. The prime coat shall not be applied during rainy weather or when the atmospheric temperature is less than 50 ^{o}F.

e. Cost.--The cost for furnishing and placing bituminous surfacing shall be included in the lump sum price offered in the schedule for furnishing and erecting the pre-engineered metal building.

% **1.6.3 LIGHT POLE RELOCATION**
%
% **a. General.--The contractor shall furnish all equipment and materials necessary to**
% **relocate the existing light pole as shown on drawing No. 2 (45-301-6574). The relocated**
% **light pole shall include a new concrete foundation as shown on drawing No. 24(45-300-**
% **201), and all required conduit and wiring. The relocated light pole shall be fully**
% **functional after being relocated.**
%

b. Materials. -

(1) Concrete.--Division 3

(2) Electrical.--Division 5

c. Cost.--Cost of relocating the light pole shall be included in the lump sum price offered in the schedule for furnishing, and erecting the pre-engineered metal building.

temperatures for the duration of the curing period. Then after discontinuance of the water curing, this concrete shall be maintained above freezing for the next 72 hours. Where artificial heat is employed, special care shall be taken to vent the heater and to keep the concrete from drying.

3.2.6. FINISHES AND FINISHING

a. General.--The requirements for finishing of concrete surfaces shall be as specified in this paragraph, or as directed by the Contracting Officer. The Contractor shall notify the Contracting Officer before placing concrete that requires a finished surface. Unless inspection is waived in each specific case, finishing of concrete shall be performed only when a
% Government inspector is present. **3/4" tooled joints shall be placed in the pre-engineered**
% **building concrete slab, in addition to the construction joint, at a maximum spacing of**
% **20 feet**.

Deviations from specified lines, grades, and dimensions shall not exceed 1/2-inch. The maximum allowable concrete surface irregularity as determined by measuring the gap between a straightedge and the concrete surface is 1/8-inch.

b. Formed surfaces.--Formed surfaces of concrete will not require finishing unless the formed surface will be exposed to public view.

c. Unformed surfaces.--The Contractor shall finish the unformed concrete surface by using a floated finish unless directed by the Contracting Officer.

Floating may be performed by use of hand or power driven equipment. Floating shall be started as soon as the screeded surface has stiffened sufficiently and shall be the minimum necessary to produce a surface that is free from screed marks and is uniform in texture. The floor slab shall be given a smooth finish and the approaches shall be given a broom finish.

d. Cost.--The cost of furnishing all materials and performing all work necessary for finishing concrete as specified herein shall be included in the price offered in the schedule for furnishing and placing reinforced concrete.

3.2.7. REPAIR OF CONCRETE

a. General.--Concrete shall be repaired in accordance with this paragraph and Bureau of Reclamation "Standard Specifications for Repair of Concrete," dated March 1, 1990.

b. Submittals.--Submittals shall be in accordance with paragraph 1.1.4. (Submittal Requirements) and the "Standard Specifications for Repair of Concrete."

c. Method of repair or replacement.--The method of repair or replacement shall be as determined and directed by the Contracting Officer and in accordance with the "Standard Specifications for Repair of Concrete."

d. Cost.--The cost of furnishing all materials and performing all work required in the repair of concrete shall be borne by the Contractor.

3.2.8. MEASUREMENT AND PAYMENT

Measurement, for payment, for furnishing and placing reinforced concrete will be made on the basis of the dimensions shown on the drawings or where dimensions are not shown on the drawings the basis shall be as prescribed by the Contracting Officer.

Payment for furnishing and placing reinforced concrete will be made at the unit price per cubic yard offered therefore in the schedule. The price offered in the schedule shall include the cost of all materials and labor required for the concrete placements including furnishing and placing reinforcing bars and fabric and any associated submittals of bar diagrams.

SECTION 3.3 - JOINTS AND EDGES IN CONCRETE

3.3.1. JOINTS AND EDGES

a. Construction joints.--Construction joints are joints which are purposely placed in concrete to facilitate construction; to reduce initial shrinkage stresses and cracks; to allow time for the installation of embedded metalwork; or to allow for the subsequent placing of other concrete. Bond is required at construction joints regardless of whether or not reinforcement is continuous across the joint.

The location of all construction joints in concrete work shall be subject to approval of the Contracting Officer, and the joints shall be constructed in accordance with the requirements of this paragraph.

b. Expansion joints.--

(1) General.--Expansion joints shall be constructed between the floor slab and the approach aprons and equipment slabs as shown on the drawings.

Preformed bituminous joint filler shall be placed in all expansion joints. The Contractor shall furnish and place the preformed bituminous joint filler. The joint filler shall cover the entire surface of the concrete at each joint, and shall be laid against the concrete and held rigidly in place while the concrete is placed on the other side of each joint. All joints in the joint filler shall be tightfitting butt joints.

(2) Materials.--Preformed bituminous joint filler shall conform to ASTM D-1751.

c. Edges.-- The Contractor shall tool or chamfer edges of concrete where shown on the drawings and elsewhere as required.

d. Cost.--The cost of furnishing all materials and performing all work for constructing construction joints, contraction joints, control joints, and expansion joints and for tooling or chamfering concrete edges shall be included in the price offered in the schedule for the furnishing and placing reinforced concrete.

mastic with the upper and lower panels. At roof end laps, one or two beads, 1/4" each, permanently pliable mastic shall be applied.

Fasteners for roof panels shall be installed in the flat of the panel at a spacing of 1 foot on center except at end laps and terminal ends, where the spacing shall be a nominal 6 inches on center. Fasteners for wall panels shall be installed in the flat of the panel at a spacing of 1 foot on center.

Damaged or defective areas of paint or galvanizing shall be cleaned and repaired in accordance with recommendations of the building manufacturer.

Care shall be taken to ensure that all parts are installed in correct position and alinement. The building anchor bolts shall be located accurately and shall be held in correct position and alinement during placing and setting of the concrete.

Baseplates shall be leveled or aligned carefully, adjusted to correct alinement and grade with steel shims as necessary and rigidly secured in place. Spaces under the baseplates shall be filled completely with grouting mortar according to Paragraph 3.4.2. (Grouting Mortar).

The ridge, eaves, corners, and panel joints shall be closed and sealed watertight.

4.1.6. HINGED DOORS

a. General.--The Contractor shall furnish and install standard hinged doors at the locations shown on the specification drawings or approved submittal drawings. The doors shall be 3'-0" x 7'-0" *x* 1-3/4", single swing, flush panel metal doors.

b. Door and Frame.--The 3-foot 0-inch by 7-foot 0-inch hollow core steel doors shall meet the requirements of SDI-100 published by the Steel Door Institute. The door shall be grade III, model 3, galvanized steel, with flush end closure treatment at top and internal construction of polyurethane core, polystyrene core, or steel vertical stiffeners and fiberglass insulation. The frame shall be a hollow steel frame constructed of 14-gauge, minimum, galvanized steel. The doors and frames shall be bonderized and furnished with one finish coat of oven baked rust
% inhibiting alkyd white enamel paint meeting the manufacturer's specifications. **The doors shall**
% **have a paint finish coat matching the building trim color.**

~~All door hardware shall be of standard commercial quality and the design and finish shall be~~
% ~~subject to the approval of the Contracting Officer.~~ **The Government's existing security**
% **system is the Sargent Maximum Security System as manufactured by Sargent and**
% **Company. The Contractor shall provide all necessary hardware for Sargent Maximum**
% **Security System except the lock cylinders and keying. The Contractor shall install the**
% **government furnished lock cylinders**. Hinges shall be full mortise.

Each door shall be provided with an aluminum threshold and a prepainted white drip. The junction of the door frame and wall panels shall be made weathertight by the use of a trim and sealant. The cross section of the trim shall be subject to approval of the Contracting Officer.

c. Cost.--The cost for furnishing and installing hinged doors, including all labor and materials, shall be included in the lump sum price offered in the schedule for furnishing and erecting the pre-engineered metal building.

4.1.7. INSULATED STEEL ROLLING DOORS

a. General. -- The Contractor shall provide manually-operated insulated steel rolling doors with weatherstripping for the shop building as shown on the drawing. The insulated steel rolling doors shall be complete with hood, barrel, door curtain, guides, counterbalance assembly, manual operator assembly, weather seals, and all accessory material required for complete installation.

The steel rolling doors shall be a product of a manufacturer regularly engaged in the manufacture of insulated steel rolling doors of the type specified. The door curtain shall be inside mounted between jambs with outside face flat in appearance.

The insulated steel rolling doors shall be designed to minimize the infiltration of wind, water, sand and dust and shall be designed for a wind pressure of not less than 25 pounds per square foot. The door shall be mounted on the interior face of the wall.

b. Submittals. -- Submittals shall be in accordance with this paragraph and paragraph 1.4.3. (Submittal Requirements).

(1) Shop drawings. -- At least 30 days before shipment to the jobsite, submit shop drawings and data covering details of the insulated steel rolling doors and hardware. Show size and location of door framing and reinforcement; gages of steel, thickness and type of insulation, “R” factor of door curtain, details and location of manual operator and door hardware, details of guides and brackets, details of weatherstripping, and other details covering fabrication and installation of the doors and frames.

(2) Product data. -- Include manufacturer's catalog sheets, specifications, color charts, and information showing that material and equipment are in accordance with these specifications.

(3) Installation data. -- Submit manufacturer’s installation data.

(4) Maintenance data. -- Submit manufacturer’s maintenance data.

c. Materials. -- The insulated steel rolling doors shall be the 625 Series "Stormtite" insulated rolling door manufactured by Overhead Door Company, P.O. Box 809046, Dallas TX 75380-9046; or the “Thermal-Door” insulated rolling door manufactured by Atlas Door Corporation, 116 Truman Drive, Edison NJ 08818; or equal, having the following salient characteristics:

(1) Structural steel. -- ASTM A 36.

(2) Sheet steel. -- ASTM A653 with not less than G-90 zinc coating. General requirements shall be In accordance with ASTM A924.

Low-voltage rating.....480/277 volts grounded wye

Basic impulse insulation level.....30 kilovolts (high side)
1.2 Kv (low side)

Taps, rated kilovolt ampere capacity.. ±2 1/2 %, ±5%, -7 1/2%, -10%

Impedance.....6.5 percent

Temperature rise..... 150°C

The transformers shall be capable of operating at specified loading and temperature rises when installed in the following ambient temperatures:

Average ambient temperature for 24 hours .....185°C insulation class

(2) Transformer T4 shall have the following ratings and features:

Type.....1 phase, 60 hertz
outdoor, dry-type

Capacity.....100 kVA

% High-voltage rating.....~~240/~~ **480** volt

Low-voltage rating.....120/240

Basic impulse insulation level.....1.2 kilovolts (high side)

Taps, rated kilovolt ampere capacity.. ±2 1/2 %, ±5%, -7 1/2%, -10%

Impedance.....5.2 percent

Temperature rise.....150°C

The transformer shall be capable of operating at specified loading and temperature rises when installed in the following ambient temperatures:

Average ambient temperature for 24 hours 185 °C insulation class

(3) The transformers shall be provided with those accessories specified in ANSI C57.12.01 and C57.12.50.

(4) Transformer T5 shall consist of high and low-voltage cable terminating compartments. There shall be no exposed screws, bolts, or other fastening devices which are externally removable, nor shall there be openings through which foreign objects such as sticks, rods, or wires might contact live parts. Compartment doors shall be provided with means of padlocking. Construction shall limit entry of water (other than floodwater) into compartment to prevent impairment of operation of transformer. The enclosure shall be dry-type, NEMA dR outdoor, general purpose, pad-mounted.

(5) Transformer T5 shall have Incoming and outgoing terminal compartments with hinged doors with provisions for latching in open position and shall be located side by side separated by steel barrier with incoming compartment on the left. High-voltage (incoming) compartment shall be accessible only after door to low-voltage (outgoing) compartment has been opened. To facilitate making connections and permit cable pulling, doors and compartment hood shall be removable. Removable doorsill on compartments shall be provided to permit rolling or skidding of unit into place over conduit studs in foundation.

(6) Transformer T5 primary load-break fused disconnect switch assembly. -- Paragraph 5.3.2.

(7) Transformer T5 secondary manually operated load-break disconnect switch. -- Paragraph 5.3.3.

(8) Grounding. - Grounding shall be in accordance with Section 5.2 (Grounding), and as shown on the drawings. There shall be provisions for grounding in both high- and low-voltage compartments in transformer T5 as well as in transformers T4 and T6. The contractor shall provide solderless, clamp-type lugs or terminals for connecting to ground cables.

(9) Special tools and accessories required for installation, normal operation, and maintenance of equipment shall be furnished by the Contractor.

(10) Nameplates. - A nameplate shall be mounted on the front of each transformer. The nameplate material, type B, and engraving shall be in accordance with drawing No. 18 (40-D-6234).

(11) Transformer T6 shall have the following ratings and features:

Type.....1 phase, 60 hertz
outdoor, dry-type

Capacity.....50 kVA

High-voltage rating.....480 volt

SECTION 5.4 - FURNISHING AND INSTALLING POWER CABLE

5.4.1. FURNISHING AND INSTALLING POWER CABLE

a. General. -- The Contractor shall furnish all materials and equipment necessary for installing power cable between the new carpentry/sandblast shop, existing long-term storage building and the switchyard relay house in accordance with these paragraphs and as shown on the drawings.

This work includes:

% (1) Furnishing and installing power cable, in 4" conduit, ~~between~~ **from** 480v panelboard % L4 to ~~480V panelboard L6 and~~ transformer T5 **and from 480v panelboard L6 to** % **transformer T5. The measured distance is 900 linear feet from 480v panelboard L6** % **to transformer T5.**

(2) Modifying the existing conduit in the warehouse yard as shown on drawing No. 2 (45-301-6574).

% (**3**) Furnishing and installing power cable in the existing conduit between transformer % T5 and the switchyard relay house. **The measured distance is 6800 linear feet.**

% (**4**) Core drilling one hole in the wall of the existing relay house.

% (**5**) Making final connections of the power cable and corresponding conduit to the 480V panelboard L4, transformer T4, 120/240V panelboard L5, 480V panelboard L6, transformer T6, existing 120/240V panelboard and transformer, shown on drawing No. 2 (45-301-6574) and drawing No. 3 (45-301-6575), to the bus bar in the existing switchyard relay house, shown on drawing No. 12 (45-D-8494) and to the 480-volt distribution panel.

b. Materials. -- The materials for installing power cable shall conform to the following requirements:

(1) Power cable. -- Transformer T4 to 120/240 volt distribution panel L5, 480 volt distribution panel L4 to Transformer T5 and 480 volt distribution panel L6 to Transformer T5:

(a) Single-conductor, nonshielded type, minimum conductor size shall be 350 MCM copper.

(b) UL listed and shall bear the UL-type label on the outer surface in accordance with NEC, 1996.

(2) Power cable. -- 480 volt distribution panel L4 to Transformer T4:

(a) Single-conductor, nonshielded type, minimum conductor size shall be 2/0 AWG copper.

(b) UL listed and shall bear the UL-type label on the outer surface in accordance with NEC, 1996.

(3) Power cable. -- Transformer T5 to relay house

(a) Single- conductor, nonshielded type, minimum conductor size shall be 3/0 AWG copper with concentric ground, 15 kv insulated.

(b) UL listed and shall bear the UL-type label on the outer surface per NEC, 1996.

% **(c) Power cable shall be rated for direct burial.**

(4) Conduit. -- Paragraph 5.1.1.

(5) Dry-type transformers. -- Paragraph 5.3.1.

(6) Power cable. -- 480 volt distribution panel L6 to Transformer T6:

(a) Single-conductor, nonshielded type, minimum conductor size shall be 3 AWG copper.

(b) UL listed and shall bear the UL-type label on the outer surface in accordance with NEC, 1996.

(7) Power cable. -- Existing 120/240 volt distribution panel to Transformer T6:

(a) Single-conductor, nonshielded type, minimum conductor size shall be
% ~~3~~ **2/0** AWG copper.

(b) UL listed and shall bear the UL-type label on the outer surface in accordance with NEC, 1996.

c. Installation. -- The power cable shall be installed as shown on the drawings and in accordance with the applicable requirements of the NEC, 1996 and NFPA-101, 1997.

Making electrical connections shall include furnishing all materials to make the connections and shall be made in accordance with the following:

(1) Clean the contact surfaces immediately prior to making the connection to remove dirt deposits and any old joint compound.

(a) Prepare tinned contact surfaces by rubbing with fine steel wool.

(b) Prepare untinned contact surfaces by cleaning to bright metal with emery cloth. Remove nicks and ridges by filling. Wipe off all copper particles.

(2) Coat the contact surfaces with a “nongrit” joint compound such as NO-OX-ID “A-Special.”

(3) Do not abrade the copper contact surfaces through the joint compound.

(4) Bolt the bus connection in accordance with the following:

(a) Lubricate bolts with a nongrit joint compound such as NO-OX-ID or Alcoa No. 2 EJC.

(b) Torque all bolts in accordance with manufacturer's instruction.

(c) Remove excess joint compound expect a small bead around the joint to prevent entrance of moisture and dirt.

d. Core Drilling.-- The contractor shall core drill one hole in the existing reinforced concrete wall of the relay house as indicated on specification drawing No. 11 (45-D-8494). The core
% hole shall be ~~larger~~ **6 inches** in diameter ~~than the outside diameter of the 4" conduit to be installed~~. Core drilling shall be the only acceptable method for cutting through the wall for installation of conduit. Upon completion of the hole, the Contractor shall thoroughly clean up all cuttings or other waste materials resulting from the core drilling operations in accordance Paragraph 1.5.6 (Cleanup and Disposal of Waste Materials). If drilling water is used, surfaces of concrete to remain exposed shall be cleaned immediately so as to prevent discoloration of the concrete by the drilling water and cuttings. The Contractor shall take all necessary precautions required to contain drilling fluids and prevent them from leaking to lower floors or otherwise becoming a nuisance or hazard.

e. Fire Retardant Sealant.-- Where the conduit is installed through the existing concrete wall, the Contractor shall seal the annular space between the conduit and the perimeter of the core hole with fire retardant sealant. The sealant shall be placed in accordance with manufacturer's instructions.

f. Testing. -- The Contractor shall perform megger tests on each power cable conductor per Section 5.4.b, insulated conductors in section 5.1.2 and specification drawing number No. 6 (45-301-6578).

g. Submittals. -- Submittals shall be in accordance with this subparagraph, and paragraph 1.1.4. (Submittal Requirements).

The Contractor shall submit the data listed below.

(1) Manufacturer's data for each type/size power cable and fire retardant sealant.

(2) Meggar test reports.

h. Cost. -- The cost for furnishing all materials, installing cable, core drilling, installing sealant, and making all power connections for the power cable will be made at the applicable lump sum price for furnishing and installing power cable and transformers.

5.4.2. PAYMENT

Payment for furnishing and installing power cable and transformers shall be included in the lump sum price offered therefor in the schedule, which price shall include the cost of all labor, materials, equipment and incidentals, required for complete installation of the power cable and transformers, as shown on the drawings and herein specified.

SECTION 6.6 - PVC PIPING

a. General. - The contractor shall furnish and install a 3/4" PVC water line from the existing 2-1/2" water line to the evaporative cooler as shown on drawing No. 2 (45-301-6574) and drawing No 4 (45-301-6576).

b. Materials. -

(1) Pipe. - Schedule 80 PVC

(2) Fittings. - Schedule 40 PVC, solvent weld, socket type

(3) Shut-off valve. - Paragraph 6.3.c (11)

c. Installation. - The contractor shall locate the existing 2-1/2" water line which is buried approximately 3-feet deep. The new 3/4" water line shall be attached to the existing water line using a "T" type fitting, riser, and required reducers and shall be buried a minimum of 18" deep to the top of pipe. The new water line shall bedded in 2" of sand or fine earth. The trench shall be backfilled and compacted as required to protect the pipe. Warning tape shall be placed in the trench 12" above the pipe.

d. Testing. - Following installation, and prior to back filling the trench, the water line shall be tested at service pressure. Any leaks shall be immediately repaired.

e. Cost. - Cost of furnishing and installing the water line shall be included in the lump sum price offered in the schedule for furnishing, and erecting the pre-engineered metal building.

Sheet No.	Drawing No.	Drawing Title
10	45-D-8417	Boulder Switchyard - Concrete Structure City of Los Angeles Relay House Equipment Arrangement - Conduit Installation
11	45-D-8494	Hoover Switchyard - Electrical Installation City of Los Angeles Relay House Section Showing Conduit Installation in Basement
12	45-D-10135	Hoover Switchyard - Electrical Installation 2300 volt Wiring Diagram
13	40-D-6263	General Notes and Minimum Requirements for Detailing Reinforcement
14	40-D-4334	Electrical Installation Typical Grounding Details
15	40-D-4335	Electrical Installation Typical Grounding Details
~~16~~	~~40-D-5370~~	~~Buried Insulated Cables Typical Details~~
17	40-D-4753	Electrical Installation Grounding Details
18	40-D-2567	Standard Nameplates
19	001	As built of Underground Facility
20	002	As built of Underground Facility
21	Details of 001	As built of Underground Facility
22	Details of 002	As built of Underground Facility
23	DC94-1260-1 (Rev. B)	General Arrangement of Ducon Standard Uni- Pulse Filter
% **24**	**45-300-201**	**Warehouse - Miscellaneous Details**